CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER 88-085

NPDES NO. CA0005002

WASTE DISCHARGE REQUIREMENTS FOR:

USS-POSCO INDUSTRIES
PITTSBURG PLANT
CONTRA COSTA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter the Board) finds that:

1. USS-POSCO Industries (hereinafter called the Discharger) submitted an NPDES permit application (Report of Waste Discharge), dated September 16, 1987 and amended it by submittals dated September 29, 1987, November 9, 1987, and April 6, 1988 for reissuance of NPDES Permit No. CA0005002 for its Pittsburg Plant.

2. The discharge of wastewater from the USS-POSCO facility is currently regulated by Waste Discharge Requirements, Order No. 83-9, adopted by the Board on March 16, 1983. Order No. 83-9 was issued to United States Steel Corporation. Prior to April 1, 1986 the facility was owned and operated solely by United States Steel Corporation.

3. The Discharger operates a steel finishing plant. Final products include zinc, tin, and chrome coated steel strip. Processes used in the finishing are electrolytic tinning and chroming, pickling with hydrochloric and sulfuric acid, hot coat galvinizing, cold rolling, alkaline cleaning, and annealing.

4. The Discharger currently discharges an average of 18.9 million gallons per day (mgd) of combined process wastewaters, cooling waters, and during periods of wet weather, stormwater runoff. Treatment of this waste, designated Waste 001, includes equalization, chemical precipitation, sedimentation, and neutralization. Waste 001 is discharged via an open channel to New York Slough, a water of the United States, at a point approximately 1000 feet easterly of the westerly end of the Discharger's shipdock.

5. The Discharger also discharges a waste, designated Waste 002, which consists of stormwater runoff which may be contaminated. Waste 002 is discharged about 1100 feet west of the Discharger's shipdock. Up to 2550 gallons per minute of Waste 002 can be pumped to the wastewater treatment system.

6. The Discharger is currently undergoing a major modernization of the steel finishing plant. Completion of the modernization project, which includes the construction of continuous pickling, cold rolling, and annealing lines, is expected in early 1989. Complete transition to the new lines is expected by early 1990. The modernization is expected to have an impact on wastewater flow and characteristics because of reduction in water usage through conservation and use of cooling towers in place of the present once-through cooling systems, and shutdown and startup of operating units.

7. The Board adopted Resolution No. 76-16 on November 16, 1976 granting the Discharger exemptions to the "Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California". The State Water Resources Control Board (State Board) adopted Resolution No. 79-108 on December 20, 1979 concurring with the Regional Board Resolution No. 76-16, and finding that a maximum discharge temperature of 93°F would not compromise the protection and propagation of a balanced indigenous population of shellfish, fish, and wildlife.

8. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on December 17, 1986, and the State Board approved it on May 21, 1987. The provisions of this permit are consistent with the objectives of the Basin Plan.

9. The beneficial uses of Suisun Bay and contiguous water bodies including New York Slough are:

   a. Water contact recreation
   b. Non-contact water recreation
   c. Navigation
   d. Open commercial and sport fishing
   e. Wildlife and estuarine habitat
   f. Fish spawning and migration
   g. Industrial uses
   h. Preservation of rare and endangered species
   i. Shellfishing

10. The Basin Plan includes the following prohibition:

    "...It shall be prohibited to discharge:

    Any wastewater which has particular characteristics of concern to beneficial uses at any point at which the wastewater does not receive a minimum initial dilution of at least 10:1 or into any nontidal water, dead-end slough, similar confined waters, or any immediate tributaries thereof."

11. The Basin Plan provides that exceptions to this discharge prohibition will be considered for discharges where:

    a) an inordinate burden would be placed on the discharger relative to beneficial uses protected and an equivalent level of environmental protection can be achieved by alternate means, such as an alternative discharge site, a higher level of treatment, and/or improved treatment reliability; or

    b) a discharge is approved as part of a reclamation project; or

    c) it can be demonstrated that net environmental benefits will be derived as a result of the discharge.

12. The issuance of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 (commencing with Section 21110) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.

13. Effluent limitation guidelines requiring the application of best available technology economically achievable (BAT) have been promulgated by the U.S. Environmental Protection Agency for the Iron and Steel Manufacturing Point Source Category 40 CFR Part 420 on May 27, 1982 and for the Metal Finishing Point Source Category 40 CFR Part 433 on July 15, 1983. Effluent limitations of this Order are based on these guidelines, the Basin Plan, State Plans and Policies, and best professional judgement.

14. Effluent limitation and toxic effluent standards established pursuant to Sections 208(b), 301, 304, and 307 of the Federal Water Pollution Control Act and amendments thereto are applicable to the discharge.

15. The Board has notified the Discharger and interested agencies and persons of its intent to reissue waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

16. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the Discharger, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Federal Water Pollution Control Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. Effluent Limitations

1. The discharge of Waste 001 containing constituents in excess of the following limits is prohibited:

Constituent	Units	Monthly Average	Daily Maximum
TSS	lbs/day	1690	3710
	kg/day	768	1690
Oil and Grease	lbs/day	841	2050
	kg/day	382	932
	mg/l	10	20
Phenolic Compounds	lbs/day	18	37
	kg/day	8.2	16.8
Total Chromium	lbs/day	30.2	48.9
	kg/day	13.7	22.2
Lead	lbs/day	11.4	23.6
	kg/day	5.2	10.7
Nickel	lbs/day	42.0	70.3
	kg/day	19.1	32.0
Zinc	lbs/day	30.8	60.4
	kg/day	14.0	27.4
Iron (dissolved)	lbs/day	13.1	39.3
	kg/day	6.6	17.9
Naphthalene	lbs/day		0.29
	kg/day		0.13
Tetrachloroethylene	lbs/day		0.42
	kg/day		0.19
Settleable Solids	ml/l-hr	0.1	0.2

2. The survival of test fishes in 96 hour parallel continuous flow-through bioassays of the discharge of Waste 001 shall achieve a median of 90 percent survival for three consecutive samples and a 90 percentile value of not less than 70 percent for 10 consecutive samples for each of two species. One species shall be three spine stickleback, and the other shall be either rainbow trout or fathead minnow.

3. Waste 001 shall not have a pH less than 6.5 nor greater than 8.5.

4. The maximum temperature of Waste 001 shall not exceed 93°F.

5. The discharge of Waste 001 containing constituents in excess of the following limits is prohibited:

Constituents	Units	Daily Maximum
a. Arsenic	ug/l	20
b. Cadmium	ug/l	10
c. Hexavalent Chromium (1)	ug/l	11
d. Copper	ug/l	20
e. Lead	ug/l	5.6
f. Mercury	ug/l	1
g. Nickel	ug/l	7.1
h. Silver	ug/l	2.3
i. Zinc	ug/l	58
j. Cyanide	ug/l	25
k. Phenolic Compounds	ug/l	500
l. Polynuclear Aromatic Hydrocarbons (PAHs) (2)	ug/l	15

(1) The Discharger may meet this limit as total chromium.

(2) As identified by EPA Method 610. If the discharge exceeds the limit for PAHs, concentrations of individual PAH constituents shall be reported.

6. The discharge of Waste 002 containing constituents in excess of the following limits is prohibited:

Constituents	Units	Daily Maximum
Oil and Grease	mg/l	20
pH	pH units	6.5 to 8.5
Visible oil	observation	none
Visible color	observation	none

B. Receiving Water Limitations

1. The discharge of Waste 001 shall not cause the following conditions to exist in waters of the State at any place at levels that cause nuisance or adversely affect beneficial uses:

   a. Floating, suspended, or deposited macroscopic particulate matter or foam;

   b. Bottom deposits or aquatic growths;

   c. Alteration of temperature, turidity, or apparent color beyond present natural background levels;

   d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;

   e. Toxic or deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of Waste 001 shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:

a. Dissolved oxygen:	7.0 mg/l minimum. The median dissolved oxygen concentration for any three consecutive months shall not be less than 80 percent of the dissolved oxygen content at saturation.	
b. Dissolved sulfide:	0.1 mg/l maximum.	
c. pH:	The pH shall not be depressed below 6.5 nor raised above 8.5, nor caused to vary from ambient pH levels by more than 0.5 units.	
d. Un-ionized ammonia: (as N)	0.025 mg/l 0.16 mg/l	Annual Median, Maximum at any time.

3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable water quality standards are approved or promulgated pursuant to Section 303 or the Federal Water Pollution Control Act or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

4. The waste as discharged shall not create a zone, defined by water temperature, of more than 1°F above natural receiving water temperature, which exceeds 25 percent of the cross-sectional area of New York Slough at any point.

C. Prohibitions

1. The discharge of Waste 001 at any place where it does not receive a minimum initial dilution of at least 10 to 1 is prohibited unless the Board has granted the Discharger an exception.

2. The discharge of all conservative toxic and deleterious substances, above those levels which can be achieved by a program acceptable to the Board, is prohibited.

D. Provisions

1. The Discharger shall comply with all limitations, prohibitions, and other provisions of this Order immediately upon adoption by the Board except as noted below.

2. Compliance with Prohibition C.1. shall be achieved in accordance with the following time schedule:

Task	Deadline
Submit a progress report on compliance with Prohibition C.1.	July 1, 1988
Submit plans and interim time schedule for compliance with Prohibition C.1. and, if appropriate, a request for consideration of an exception to the prohibition.	December 1, 1988
Begin submitting quarterly progress reports.	April 1, 1989
Achieve full compliance with Prohibition C.1.	July 1, 1990

The final compliance date may be modified based on Board approval of the compliance implementation schedule to be submitted by the Discharger by December 1, 1988.

3. Compliance with Prohibition C.2. and Effluent Limitations A.5.c., A.5.g., A.5.e., and A.5.i., shall be achieved in accordance with the following time schedule:

Task	Deadline
Develop and submit a receiving water and sediment quality impact study plan, and implement the study upon approval of the Executive Officer.	July 1, 1988
Determine sources, and develop and implement a source control and treatment plant effectiveness program. Begin submitting quarterly progress reports.	October 1, 1988

Complete evaluation of wastewater treatment plant effectiveness and source control, and submit report.	May 1, 1989
Complete receiving water and sediment impact study, and submit report.	May 1, 1989
Submit alternate limit proposal.	July 1, 1989
Achieve compliance with Effluent Limitation A.5., or alternate limit approved by the Board.	September 1, 1989

4. The Discharger shall review and update annually its contingency plan as required by Board Resolution No. 74-10. Discharge in violation of this Order where the Discharger has failed to develop and/or implement a contingency plan will be the basis for considerating such discharge a willfull and negligent violation of this Order pursuant to Section 13387 of the California Water Code.

5. The Discharger shall comply with the attached self-monitoring program as adopted by the Board and as may be amended by the Board pursuant to EPA regulations 40 CFR 122.62, 122.63, and 124.5.

6. The Discharger shall develop and submit a Best Management Practices (BMP) program and schedule for implementation to the Board by January 1, 1989. The BMP program shall be consistent with the EPA regulations 40 CFR 125, Subpart K and the general guidance contained in the "NPDES Best Management Guidance Document", EPA Report No. 600/9-79-045, December 1979 (revised June 1981). The BMP program shall specifically address: segregation of non-contaminated stormwater from the wastewater treatment system; segregation and/or recycle of cooling water; prevention of acid-waste spills to the wastewater treatment system; source control of metallic wastes; and construction of influent containment facilities for hard-to-treat waste. A BMP program acceptable to the Executive Officer shall be initiated no later than July 1, 1989 in accordance with an approved implementation schedule.

7. The Discharger shall submit a report to the Board by August 1, 1988 which includes an evaluation of the wastewater treatment system's ability to store or treat all process wastewater. In addition, the report shall include the costs of providing complete storage or treatment capacity for storm flow return periods of 5, 10, and 20 years. The report shall also describe a plan and time schedule to provide an alarm and monitoring system in the event of the bypass of any wastewater. The monitoring system shall include the measurement of flow and the sampling of all constituents which have effluent limits. A plan and time schedule acceptable to the Executive Officer shall be implemented by October 1, 1988.

8. This Order includes all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated December 17, 1986.

9. Pursuant to EPA regulations 40 CFR 122.42(a) the Discharger must notify the Board as soon as it knows or has reason to believe (1) that they have begun or expect to begin, use or manufacture a toxic pollutant not reported in the permit application, or (2) a discharge of a toxic pollutant not limited by this permit has occurred, or will occur, in concentrations that exceed the specified limits in 40 CFR 122.42(a).

10. This Order shall be modified or alternatively revoked and reissued to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(c), and (d), 303, 304(b)(2), and 307(a)(2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:

    (a) Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or,

    (b) Controls any pollutant not limited in the permit.

    The Order as modified or reissued under this paragraph shall also contain any other requirements of the Act then applicable.

11. Pursuant to EPA regulations 40 CFR 122.44, 122.62, and 124.5 this Order may be modified prior to the expiration date to include effluent limitations for toxic constituents determined to be present in significant amounts in the discharge.

12. This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Water Pollution Control Act, or amendments thereto, and shall take effect at the end of ten days from the date of hearing provided the Regional Administrator, U.S. Environmental Protection Agency, has no objections.

13. All applications, reports, or information submitted to the Board shall be signed and certified pursuant to EPA regulations 40 CFR 122.41(k).

14. Order No. 83-9 is hereby rescinded.

15. This Order expires on March 16, 1993 and the discharger must file a Report of Waste Discharge in accordance with Title 23, California Administrative Code, not later that 180 days in advance of such date as application for issuance of new waste discharge requirements.

I, Roger B. James, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on May 18, 1988.

ROGER B. JAMES
Executive Officer

Attachments: Standard Provisions, Reporting
Requirements and Definitions dated December 1986
Self-Monitoring Program

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

TENTATIVE
SELF-MONITORING PROGRAM
FOR

USS-POSCO INDUSTRIES
PITTSBURG PLANT

NPDES NO. CA0005002

ORDER NO. 88-085

CONSISTS OF

PART A (dated December 1986)

AND

PART B

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. EFFLUENT

Station	Description
E-001	At any point in the outfall from the treatment facilities of Waste 001 between the point of discharge and the point at which all waste tributary to the outfall is present.
E-002	At any point in the outfall of Waste 002 between the point of discharge and Pump Station No. 1.

B. RECEIVING WATERS

Station	Description
C-105W	At a point in New York Slough, located within 20 feet of shore, 105 feet westerly of E-001.
C-105N	At a point in New York Slough, located 105 feet northerly of E-001.
C-300N	At a point in New York Slough, located 300 feet northerly of E-001.
C-105E	At a point in New York Slough, located within 20 feet of shore, 105 feet easterly of E-001.
C-0	At a point in New York Slough, located at the point of discharge near the intersection of the property line and the center of the discharge channel of Waste 001.
CR-1	At a point in New York Slough, located 100 feet of shore and at midpoint between the ship dock and the Pittsburg Marina.
CR-2	At a point in New York Slough, located at the Chevron Wharf, approximately 1300 yards easterly of E-001.

II. SCHEDULE OF SAMPLING AND ANALYSIS

A. The schedule of sampling and analysis shall be that given in Table 1 (attached).

B. Sample collection, storage, and analyses shall be performed according to the latest 40 CFR Part 136 or other methods approved and specified by the Executive Officer.

III. MISCELLANEOUS REPORTING

A. In addition to the maximum, minimum, and average effluent pH values, the following information about effluent pH violations shall be reported each month (report separately for over and under the pH limitations):

a. Percent of time effluent pH was outside the limitations.

b. Number of events when pH was outside the limitations.

c. Total (cumulative) hours and minutes that pH was outside the limitations.

d. Duration of the longest continuous period of such violation.

Note that strip charts of the effluent pH record must be retained with other laboratory records, and made available for inspection by Board staff.

B. Flows at E-002 shall be reported for each discharge occurrence as follows: time of initiation of discharge; duration of discharge; total flow of discharge; and peak flow.

IV. MODIFICATIONS TO PART A

Exclude paragraph F.5.

I, Roger B. James, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Board's ResolutionNo. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Order No. 88-085.

2. Is effective on the date shown below.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the Discharger and revisions will be ordered by the Executive Officer.

ROGER B. JAMES
EXECUTIVE OFFICER

Effective Date: May 18, 1988

Attachments:
Table 1

TABLE 1

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	E-001			E-002	All C
Type Of Sample	G	C-24	Cont	G	G
Flow Rate (mgd)			D	E	
Total Suspended Solids (mg/l and kg/day)		W			
Oil and Grease (mg/l and kg/day)	W(1)			E(2)	
Settleable Solids (ml/l-hr)	W				
Fish Toxicity (percent survival)			W		
pH			D	E	M
Temperature			D		M
Dissolved Oxygen (mg/l and % saturation)					M
Phenolic Compounds (ug/l and kg/day)		M			
PAHs (ug/l and kg/day)		M(3)		Y	
Naphthalene (ug/l and kg/day)		M(3)			
Tetrachloroethylene (ug/l and kg/day)	M(4)				
Arsenic (ug/l and kg/day)		M		Y	
Cadmium (ug/l and kg/day)		M		Y	
Chromium, Total (ug/l and kg/day)		W		Y	M
Chromium, Hexavalent (ug/l and kg/day)		W			
Copper (ug/l and kg/day)		M		Y	

TABLE 1 (Continued)

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	E-001			E-002	All C
Type Of Sample	G	C-24	Cont	G	G
Iron, Total (ug/l and kg/day)		M			
Iron, Dissolved (ug/l and kg/day)		W			
Lead (ug/l and kg/day)		W		Y	M
Mercury (ug/l and kg/day)		M			
Nickel (ug/l and kg/day)		W		Y	M
Selenium (ug/l and kg/day)		M(5)		Y	
Silver (ug/l and kg/day)		M		Y	
Tin (ug/l and kg/day)		M			
Zinc (ug/l and kg/day)		W		Y	M
Cyanide (ug/l and kg/day)		M		Y	
All Applicable Standard Observations	D			E	W(6)

LEGEND FOR TABLE 1

TYPES OF SAMPLES

G = grab sample
Cont = continuous sampling
C-24 = composite sample - 24-hour

TYPES OF STATIONS

E = waste effluent stations
C = receiving water stations

FREQUENCY OF SAMPLING

D = once each day
W = once each week
Y = once each year
M = once each month
E = each occurrence

FOOTNOTES FOR TABLE 1

(1) Oil and grease sampling of Waste 001 shall consist of 3 grab samples taken at 4 hour intervals during the sampling day, with each grab being collected in a glass container. The entire volume of each sample shall be composited prior to analysis. Each glass container used for sample collection or mixing shall be thoroughly rinsed with solvent rinsings as soon as possible after use, and the solvent rinsings shall be added to the composite wastewater sample for extraction and analysis.

(2) Oil and grease sampling of Waste 002 shall consist of 1 grab sample collected in a glass container during the first hour of each discharge event. Each glass container used for sample collection shall be thoroughly rinsed with solvent rinsings as soon as possible after use, and the solvent rinsings shall be added to the wastewater sample for extraction and analysis.

(3) Polynuclear Aromatic Hydrocarbons shall be analyzed using EPA Method 610 of the July, 1982, Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, EPA-600/4-82-057. Note that the samples must be collected in amber glass containers. These samples shall be collected coincident with samples collected for the analysis of other regulated parameters. An automatic sampler which incorporates glass sample containers and keeps the samples refrigerated at 4 ^{o}C and protected from light during compositing may be used. The the 24-hour composite samples may consist of eight grab samples collected at three-hour intervals. The analytical laboratory shall remove flow-proportioned volumes from each sample vial or container for the analysis.

(4) Tetrachloroethylene shall be analyzed using EPA Method 601 of the July, 1982, Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, EPA-600/4-82-057. Grab samples shall be collected coincident with samples collected for the analysis of the other regulated parameters. In addition, the grab samples must be collected in glass containers.

(5) Selenium shall be analyzed only by the atomic absorption, gaseous hydride procedure (EPA MethodNo. 270.3 / Standard Method No. 303E).

(6) Standard Observations at the reference stations, CR-1 and CR-2, are required only on the days that samples are collected there.